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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,372	07/05/2006	Marc Maria Alex Bleukx	DE 040016	5956

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BRIARCLIFF MANOR, NY 10510

EXAMINER

ALEMU, EPHREM

ART UNIT	PAPER NUMBER
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2821

MAIL DATE	DELIVERY MODE
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09/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/585,372	BLEUKX ET AL.	
	Examiner	Art Unit	
	Ephrem Alemu	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/10/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 7, lines 3-6, the recitation, “a switching unit (S1) for switching the current flowing through the primary side (TX1a) of the transformer device (4) and a diode unit (D2)” is indefinite since it is not clear “a switching unit” recited in claim 7, is different or same to the “switching device” recited in claim 1.

For the purpose of examination, “a switching unit” is interpreted as being the same with the switching device claimed in claim 1.

Re claim 10, A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where

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broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 10 recites the broad recitation 0 W to \leq 20,000 W, and the claim also recites 1000 W to \leq 5,000 W or about 3,000 W which is the narrower statement of the range/limitation. Claim 10 further recites the broad recitation 100 nm to \leq 380 nm, and the claim also recites 180 nm to \leq 320 nm or 200 nm to \leq 300 nm which is the narrower statement of the range/limitation.

Claim Objections

4. Claim 1 is objected to because of the following informalities: Claims are not written in accordance with rule § 1.75(I).

§ 1.75(I) Claim(s).

(I) Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. Appropriate correction is required.

5. Claims 2 and 10 are objected to because of the following informalities:

In claim 2, line 2, "the means" should be rewritten as --the means for functioning as a resonant tank circuit-- to clearly identify what "the means" is referring too.

In claim 10, line 2, "claim 1" should be replaced with --claim 9-- for proper antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 4-5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Newman, JR. et al. (US Pub. 2003/0107332).

Re claim 1, Newman, JR. discloses an electronic circuit topology (Fig. 2) for driving a predominantly capacitive load (880), where a pulsed electrical power supply is used, with a primary circuit with several components (20, 24, 56, 46), a secondary circuit with or connected to a predominantly capacitive load (870, 880), and a transformer device (18) with a primary side (20) and a secondary side (222), connecting the primary circuit (20, 24, 56, 46) with the secondary circuit (870, 880), the primary circuit components comprise: a source device (i.e., valley fill circuit 830) supplying power via the transformer device (18) for operating the predominantly capacitive load (870, 880), a drain device (i.e., diode 56, inductor 46, capacitor 850) for absorbing at least a part of the power, which is reflected back from the predominantly capacitive load (870, 880) during operation, and a switching device (24) for switching a current on the primary side, the transformer device (18) is of a transformer type with a gap for transforming an input voltage-current-signal on the primary side to a suitable output voltage-current-signal for supplying the predominantly capacitive load (870, 880) on the secondary side, wherein the source device (i.e., valley fill circuit 830) is in serial connection with the transformer device (18), the drain device (i.e., diode 56, inductor 46, capacitor 850), and the switching device (24), whereby the transformer device (18) being connected to the predominantly capacitive load

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(870, 880) comprises the predominantly capacitive load (870, 880) comprises means for functioning as a resonant tank circuit (870) (Fig. 2; paragraph [0022]), as a transformer device in forward mode (i.e. first state) (paragraph [0044], and as a transformer device in flyback mode (i.e., second state) (paragraph 0045), so that a single-ended forward-flyback circuit for driving predominantly capacitive loads (870, 880) with pulse-shaped wave forms is achieved (Fig. 2; paragraphs [0041] to [0045]).

Re claims 4 and 5, Newman, JR. discloses a first inductive unit (46) located on the primary side is parallel to the transformer unit (18), whereby the first inductive unit (46) is realized by the air gap of said real transformer; wherein the primary side of the transformer device (18) is connected in series with the source device (i.e., valley fill circuit 830), the drain device (i.e., diode 56, inductor 46, capacitor 850) and/or the switching device (24) (Fig. 2).

Re claim 7, Newman, JR. further shows the switching device (24) comprises a control unit (882) for generating a pulse-shaped signal.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 2, 3 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Newman, JR. et al. (US Pub. 2003/0107332).

Re claims 2 and 3, given Newman, JR. electronic circuit topology (Fig. 2) for driving a predominantly capacitive load (880) as discussed above in claim 1, one of ordinary skill in the art could easily be able to modify the transformer device of Newman, JR. with a leakage transformer would have been easily achieved since the resonant tank circuit depends on the transformer and the characteristic of a discharge lamp.

Re claim 8, although, Newman, JR. does not show a diode in parallel with the switching device (24), providing a diode in parallel with a switching device would have been within a skilled artisan for the purpose of protecting the switch from being turned on unintentionally.

Re claims 9 and 10, although, Newman, JR. does not mention the at least one gas discharge lamp being a dielectric barrier discharge lamp, it would have been within a level of a skilled artisan to apply the teaching of Newman, JR. and to operate the well known dielectric barrier discharge lamp for no other reason than starting and operating the discharge lamp.

Allowable Subject Matter

11. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Oda et al. (US Pub. 2006/0125414); Chen (US Pub. 2005/0258778); also teach similar inventive subject matter.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EA
9-14-09

/Douglas W Owens/
Supervisory Patent Examiner, Art Unit 2821
September 14, 2009